UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

FEB 01 2012

REPLY TO THE ATTENTION OF:

Mary Ann Dolehanty
Permit Section Supervisor
Michigan Department of Environmental Quality
525 West Allegan Street
P.O. Box 30260
Lansing, Michigan 48909-7760

Dear Ms. Dolehanty,

On December 19, 2011, the U.S. Environmental Protection Agency received for review a draft construction permit for DTE Energy (permit number 93-09B) which the Michigan Department of Environmental Quality (MDEQ) intends to issue. The permit is for the proposed modification to the stack height on the five (5) existing diesel generators located at the Detroit Edison - Monroe Power Plant.

Based on our review of the draft permit, we have the following comments. We provide these comments to help ensure that the project meets Clean Air Act requirements, that the permit will provide necessary information so that the basis for the permit decision is transparent and readily accessible to the public, and that the permit record provides adequate support for the decision.

1. The modeling analysis for sulfur dioxide (SO_2) shows that modeled results and monitored background values were combined using a paired-in-time approach. The predicted concentrations were combined with maximum daily 1-hour monitoring values from Michigan City, Indiana, covering a 72-hour period spanning the modeled day. As noted in EPA's March 1, 2011, guidance on 1-hour nitrogen dioxide (NO_2) modeling, an hour-by-hour "paired sum" approach is not generally recommended because it assumes that the short-term monitored values are spatially uniform and fully representative of background levels at each modeled receptor location. Consequently, such an approach is not recommended except in "rare cases of relatively isolated sources where the monitor can be shown to be representative of the ambient concentration levels in the areas of maximum impact from the proposed new source." Although the approach based on the maximum daily 1-hour monitoring values from Michigan City, Indiana, covering a 72-hour period spanning the modeled day, would be more conservative than an hour-by-hour paired sums approach, there is insufficient justification of the adequacy and appropriateness of that approach for this application. Instead we recommend that an examination of a background value based instead on time-of-day and/or seasonal variations, in conjunction with an evaluation of nearby modeled sources, be used to produce a reasonable, more representative background value. Compliance with emission limits used to model for short-term National Ambient Air Quality Standards (NAAQS) should be determined based on averaging times consistent with the NAAQS. The SO_2 and NO_2 averaging times of 24-hour and annual, respectively, are much longer than the 1-hour averaging for the NAAQS and

consequently, may not be protective of the standards.

2. The dispersion modeling protocol document discusses the ambient boundary surrounding the DTE Energy facility. It notes the existence of 24-hour security staff. Ambient air for modeling purposes is defined as that property to which the general public is precluded access and this has typically meant physical boundaries, often in combination with posting and security surveillance. It's unclear from the write-up the extent to which the area is either fenced, under security surveillance, posted with adequate private property signage, or otherwise equipped to preclude the general public.

3. The permit record does not appear to include any air quality analysis to show that this source will not cause a violation of the ozone NAAQS. Title 40 Code of Federal Regulations (C.F.R.) 51.166(k); 40 C.F.R. 51.166(m). EPA's 8-hour ozone implementation phase 2 rule (November 29, 2005; 70 Federal Register 71612) requires that nitrogen oxides (NOx) be considered as an ozone precursor under PSD. One of the elements of that rule is a requirement that the PSD program regulations define the term "significant" for ozone to include 40 tons per year of NOx. See 40 CFR 51.166(b)(23)(i). In accordance with 40 CFR 51.166(m)(1)(a), a permit application must contain an air quality analysis for each pollutant that a new source would have the potential to emit in significant amounts. Since the proposed DTE Energy permit has NOx emissions above this significance threshold for ozone, EPA regulations require that the record contain an ozone impact analysis for this source. A quantitative modeling analysis is not necessarily required, but Michigan should consult with EPA Region 5 regarding the appropriate form for such an analysis in this case. 40 CFR Part 51, Appendix W, §5.2.1.c.

We appreciate the opportunity to provide comments on this draft permit. Please feel free to contact me or have your staff contact Constantine Blathras of my staff at (312) 886-0671.

Sincerely,

Genevieve Damico

Genevieve Damico
Chief
Air Permits Section